

Remarks

Claims 1-19 were pending. Claims 12 and 13 have been cancelled without prejudice or disclaimer. Claims 14-19 have been withdrawn from consideration in response to the restriction/election discussed below and are thereby canceled without prejudice or disclaimer in the present application. New Claims 20 - 22 have been added. Support for new claims 20 – 22 can be found in the original claims 3-6. Accordingly, no new matter has been added.

Applicants appreciate the indication of allowable subject matter in original claims 4 - 6.

Reconsideration of the outstanding rejections and passage of the claims to allowance is earnestly solicited based on the foregoing amendments and the remarks below.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-13, drawn to an apparatus for coating a filament, classified in class 118, subclass 300+.
- II. Claims 14-19, drawn to a method of recoating a bare portion of a filament, classified in class 427, subclass 492.

During a telephone conversation between the Examiner and Dr. Alan Ball on 13 August 2003, a provisional election was made with traverse to elect Group I, claims 1-13. Applicants hereby affirm the election of claims of Group I and withdrawal and cancellation of Claims 14 - 19 from consideration in the present application.

Information Disclosure Statement

Upon review of the file, it was noted that the complete initialed Form PTO-1449 filed with the Disclosure Statement dated April 19, 2001 has not been received. Specifically, "page 2 of 2" of the initialed Form PTO-1449 has been received, but "page 1 of 2" was not enclosed. It is requested that the Examiner initial the Form PTO-1449, a copy of which is enclosed for the Examiner's convenience, and return it to the undersigned attorney.

Rejections under 35 U.S.C §112

Claims 12 and 13 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Without acquiescing to the propriety of the rejection, Applicants have cancelled claims 12 and 13 without prejudice. This rejection is now moot.

Rejections under 35 U.S.C §103

Claims 1-3, 12 and 13 were rejected under 35 USC § 103(a) as being unpatentable over Imamura et al. (EP 1035425) in view of Au et al. (US Pat. No. 6,596,203). Applicants respectfully traverse for the following reasons.

Regarding claims 1 and 2, a *prima facie* case of obviousness has not been established because Imamura and Au, either taken separately or in combination, do not teach or suggest “a carriage mounted on said frame to oscillate between a first position and a second position” and “at least one radiation source attached to said frame at said second position.”

In contrast, Imamura does not teach or suggest a carriage. Assuming, *arguendo*, frame (31) of Imamura et al. could be construed as releasably securing a filament using a first holding fixture (34) and a second holding fixture (35), the first and second holding fixtures (34, 35) are clearly mounted on the frame (31), not on a carriage. In the absence of a carriage, there can be no carriage movement. Also, the only motor (36) described by Imamura is attached to the second holding fixture, i.e. the winding reel (35) of Figure 19 and shown more clearly in Figure 20 of the reference. The motor (36) drives the winding reel (35) and the mandrel (351) to “forcedly rotate the mandrel (351) --- the portion of fiber (1) between the pair of mandrels (341, 351) is forcedly extended along the fibers axial direction --- so as to cause elastic strain (expansion strain) --- in the core (of the optical fiber),” as described by the reference at page 18, paragraph 0133.

Following fiber grating formation, the description at Imamura, page 18, paragraph 0135, is directed to releasing the elastic strain, “so that the coated fiber can be returned to the original state prior to the application of tensile force.” In paragraph 0135 Imamura suggests reversal of the motor (36) to release previously applied tension from the optical fiber (1). The position of

the frame (31) remains unchanged during operation of the motor (36). Regardless of the method of applying tensile force (see also paragraph 0142), the frame (31) does not move.

Regarding the claimed feature -- “at least one radiation source attached to said frame at said second position” -- paragraphs 0130 - 0131 on page 18 of Imamura at most allude to the use of a UV laser to form a fiber grating in the coated optical fiber. There is nothing to suggest attachment of the laser (6) to the frame (31). Figure 18 of Imamura confirms that there is no such attachment. This teaches away from Claim 1 of the present invention, which requires “at least one radiation source attached to said frame.” Accordingly, Imamura fails to teach or suggest the recited structure of claims 1 and 2.

Moreover, Imamura fails to teach or suggest the recitation of curing “said curable coating by exposure to radiation from said radiation source.” Instead, Imamura is directed to the formation of a fiber grating in a coated optical fiber, not to a filament coating apparatus that coats the outside of a filament, e.g. an optical fiber. For example, Claim 1 of Imamura describes that “the grating is written by irradiating the core with the UV of the specific wavelength band through the coat layer.” It is apparent from this statement to one of ordinary skill in the art that Imamura does not teach or suggest a coating process before or after writing a fiber grating.

Thus, it is unlikely that one of ordinary skill in the art at the time of the invention would have been motivated to look to Au in order to modify the grating writing device of Imamura.

Even if, *arguendo*, one of ordinary skill in the art could have combined the teachings of Imamura with Au, the combination would still not result in the claimed invention because Au does not overcome the deficiencies of Imamura. For example, neither reference teaches oscillation or movement of a measured filament portion between a spray head and a radiation source during oscillation of a carriage. Au uses a coating head, but does not teach the use of a spray head or oscillating movement of an optical fiber. Movement of the fiber of Au is unidirectional during coating. Coating followed by curing necessitates coating and curing stations at different positions. However, there is nothing in the Au reference to suggest repeated oscillation between the positions, as described at page 47, lines 11 - 23 and claimed by the present application.

Regarding claim 3, the combination of references fails to teach or suggest “at least one radiation source attached to said frame, said filament organizer having adjustable movement over

a distance equal to the length of said measured portion to position at least said bare portion of said filament for applying a curable coating composition thereto by said spray head and thereafter to cure said curable coating composition by exposure to radiation from said radiation source,” for at least the reasons mentioned above.

Regarding claims 7-11, the alleged combination of further cited references (Kato et al., Hosoya, JP 401013105, Freychet et al., Jacobsen, and Bachmann) fails to overcome the deficiencies of Imamura and Au.

Regarding new claim 20, this claim recites the features of original claims 3 and 4 and should be allowable for the reasons stated in the office action at page 7. Dependent claims 21 and 22 recite the features of claims 5 and 6, respectively.

Accordingly, Applicants respectfully request withdrawal of the outstanding rejections and passage of the pending claims to allowance for at least the reasons expressed above.

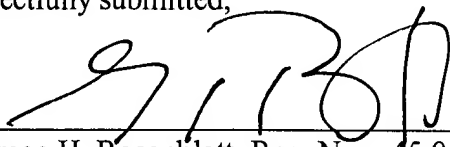
Conclusion

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application and allowance of original Claims 1 - 11 and new Claims 20 - 22 is requested. Please contact the undersigned should there be any questions or in order to expedite prosecution.

Respectfully submitted,

12/29/03

Date

By: 

Gregg H. Rosenblatt, Reg. No.: 45,056
Telephone No.: (512) 984-7443

Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833